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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,675	03/31/2004	Yoshimichi Taniguchi	032341-54650	4360
22204	7590	10/28/2005	EXAMINER	
NIXON PEABODY, LLP 401 9TH STREET, NW SUITE 900 WASHINGTON, DC 20004-2128			GOFMAN, ANNA	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/813,675

Applicant(s)

TANIGUCHI ET AL.

Examiner

Anna Gofman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/31/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Specification***

1. The disclosure is objected to because of the following informalities: Paragraphs 0009 and 0010 are not consistent. Paragraph 0009 recites the first yarn being a nylon filament containing ultra-micro silver ions and the second yarn being a polyester yarn whereas, paragraph 0010 discloses the first yarn is polyester yarn and the second yarn is a nylon filament containing ultra-micro silver ions.

Appropriate correction is required.

***Claim Objections***

2. Claim 1 is objected to because of the following informalities: A waterproof material comprising knitted fabric woven from a first yarn and a second yarn, the first yarn being a nylon filament containing ultra-micro silver ions and the second yarn being a polyester yarn. A knitted fabric cannot be woven. It is more appropriate to disclose "a knitted fabric knitted from ..." Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5. Claim 1 discloses a waterproof material comprising knitted fabric woven from a first yarn and a second yarn, the first yarn being a nylon filament containing ultra-micro silver ions and the second yarn being a polyester yarn. There is no written description in the specification as to what the "ultra-micro silver ions" are. It is clear to one of ordinary skill in the art that ions, regardless the element, are inherently micro-sized. Applicant did not disclose the precise dimensions nor define what constitutes "ultra-micro silver ions" in the specification.

6. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 5 specifically fails to teach how to make and use the powder of silver ions. To the best knowledge of the examiner, ions cannot be provided in powder form. Ions are understood to be an atom or molecular particle that carries an electrical charge from either the loss or addition of electron(s). These materials tend to exist only in solutions, plasmas or the vacuum of space.

7. Claim 9 discloses the sheet of claim 6, wherein the polyurethane film has a thickness of about 0.05 to 0.15 mm. There is a discrepancy between the specification and claim 9. In paragraph 0022 of the specification applicant states film 18 has a preferable thickness of 0.5 to 0.15 mm.

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8. Since claims 2, 3, 4, and 5 depend directly on claim 1, they also fail to comply with the written description requirement and are also not properly described in the specification.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The scope of claim 2 is unclear since it depends from itself. For purposes of Examination we will assume claim 2 should depend from claim 1.

11. Claim 5 recites the limitation the material of claim 1, wherein the silver powder ions are 1 micron or less. There is no prior recitation of silver powder ions, thereby, it is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

13. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102 (a) and (e) as being anticipated by Rock et al. (US 6,602,811) alone or as evidenced by Keenan et al.

With respect to claim 1 Rock et al. discloses a hydrophilic material (pg.1 col.1 ln.60-67 and pg.1 col.2 ln.1) comprising a fabric layer formed concurrently by knitting a plaited construction (pg.1 col.2 ln.2-3) woven from a first layer, made from a synthetic yarn material (pg.1 col.1 ln.60-61) the first yarn made from a synthetic material (pg.1 col.1 ln.11-13) comprising either polyester... or nylon (pg.2 col.4 ln.54-55) fibers coated with silver, copper or zinc metal (or ions of any thereof) (pg.1 col.2 ln.44-46) and a second fabric... made of a synthetic yarn material, such as polyester, polypropylene, acrylic or nylon... (pg.1 col.1 ln.63-67). Although Rock et al. discloses nylon fibers coated with silver ions, the ions are inherently "ultra-micro". Rock et al. refers to "knitting a plaited construction", which is a proper way of expressing applicant's incorrect phrasing of a "knitted fabric woven", as objected to above.

With respect to claim 4 Rock et al. discloses an antibacterial (pg.1 col.1 ln.15) hydrophilic fabric (pg.1 col.1 ln.63). Rock et al. states that the waterproof material is an

inherently hydrophilic property of the synthetic yarns and the ionic silver coated fibers of the yarns act as anti-microbial agents.

With respect to claim 5 requiring the silver powder ions to be 1 micron or less, it should be pointed out that ions of silver are inherently less than 1 micron. As evidence, please consult the provided textbook by Keenan et al., where the inside front cover illustrates various ion sizes.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 2 is rejected under 35 U.S.C. 103(a) as being obvious over Rock et al. (US 6,602,811) as set forth above in view of Rock et al. (US 6,194,332).

With respect to claim 2, Rock et al. (US 6,602,811) is silent with regards to the fabric being made of approximately 20 to 40% of the first yarn and 60-80% of the second yarn.

Rock et al. (US 6,194,332), however, discloses on pg.1 col.2 ln.66-67 that the yarn of the inner layer fabric comprises 30-70% and on pg.2 col.2 ln.1 that the yarn of the outer layer also comprises 30-70%.

Both patents of Rock et al. are analogous art because they are from the same field of endeavor, namely knitted materials.

Since Rock '811 is silent about the amount or yarns that each layer of fabric comprises, it is necessary, and thus obvious, to look to the prior art for suitable values. As Rock has other work in this field besides the '811 patent, which does not address these features, it would be most suitable to look to this additional work for the missing details. At the time of the instant invention it would have been obvious to a person of ordinary skill in the art to use fabric having from 20-40% of the first yarn and 60-80% of the second yarn, as taught by Rock '332, motivated by the expectation of successfully practicing the invention of Rock '811.

16. Claim 3 is rejected under 35 U.S.C. 103(a) as being obvious over Rock et al. (US 6,602,811) as set forth in section 13 above, taken in view of Matsumoto (US 20030106346).

With respect to claim 3, Rock et al. is silent with respect to the gauge of the stitches.

Matsumoto discloses a knit fabric used in medical applications which utilizes a knit with a gauge of 28 stitches (pg.14 col.2 ln.33).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to make Rock's fabric with a gauge of 28 stitches as taught by Matsumoto, motivated by Matsumoto who teaches what suitable knit gauges are for medical applications.



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17. Claims 6, 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being obvious over Rock et al. (US 6,602,811) in view of Simard (US 6,237,600).

With respect to claim 6 Rock et al. fails to disclose the use of a polyurethane film having an upper and lower side; a layer of polyurethane adhesive disposed on each upper and lower side of the film; and a layer of knitted material disposed on each layer of adhesive forming opposed outer layers of the sheet...

Simard, however, discloses a multilayer structure for surgical drapes (abstract) comprising an inner layer of a polyurethane material (pg.1 col. 1 ln.44-46) with a finely dispersed polyurethane adhesive on each side of the membrane (pg.1 col.2 ln.1-2; the membrane is analogous to the polyurethane film) with a top layer of knit fabric (pg.1 col.1 ln.47-48) and a bottom layer of knit fabric (pg.1 col.1 ln.50).

Rock et al. and Simard are analogous art because they are from the same field of endeavor namely medical textiles.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to make Rock et al.'s fabric with a polyurethane film, of which both sides are covered with polyurethane adhesive and each side with a layer of knitted material, as taught by Simard, motivated by the expectation of making the composite material impervious to biological penetration, as taught by Simard on pg.1 col.1 ln.64 and col.2 ln.10-11.

Simard discloses the polyurethane layer has a thickness of between 20 and 40 micrometers (pg.1 col.1 ln.12). 1 micrometer is equivalent to 0.001 millimeters (mm). Thus, 20-40 micrometers equates to be between 0.02 and 0.04 mm. 0.04 mm is

considered to be "about" 0.05 mm for the purposes of examination. Thus, the combination as set forth provides for the claimed invention.

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Japanese document cited on the attached 1449 was not provided with a sufficient English language description such that it could be properly considered, despite the reference there to on page 1 of the instant specification.

In addition, the following references are deemed pertinent to Applicant's invention:

Caldwell et al. (US 5,856,245) discloses a multilayer woven medical utility which is water-resistant and has antimicrobial functions, comprising of synthetic fibers such as nylon or polyester, but does not disclose an inner polyurethane layer impregnated with silver ions.

Levy et al. (US 5,707,736) discloses a knitted material made from synthetic fibers, having antimicrobial agents but does not disclose a waterproof material containing a multilayer construction comprising of a polyurethane layer impregnated with silver ions.

Jacobson et al. (US 5,180,585) discloses a multilayer composition, containing a silver coating which acts as an antimicrobial agent but does not disclose a knitted waterproof material comprising of a first and second yarn made from synthetic fabrics such as nylon or polyester

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Tadayoshi et al. (JP11124729) discloses a medical utility with antimicrobial synthetic fibers impregnated with silver ions.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Tadayoshi et al. (JP 11,124,729) reference teaches a fabric with a nylon fiber containing silver ions. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Gofman whose telephone number is (571) 272-7419. The examiner can normally be reached on Mon.-Fri. 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anna Gofman  
Examiner  
Art Unit 1771

AG

A handwritten signature in black ink, appearing to read "Terrel Morris", with a stylized flourish at the end.

TERREL MORRIS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700